



John Muir Correspondence (PDFs)

1872-12-17

Letter from [John Muir] to [Joseph] Le Conte, 1872 Dec 17.

John Muir

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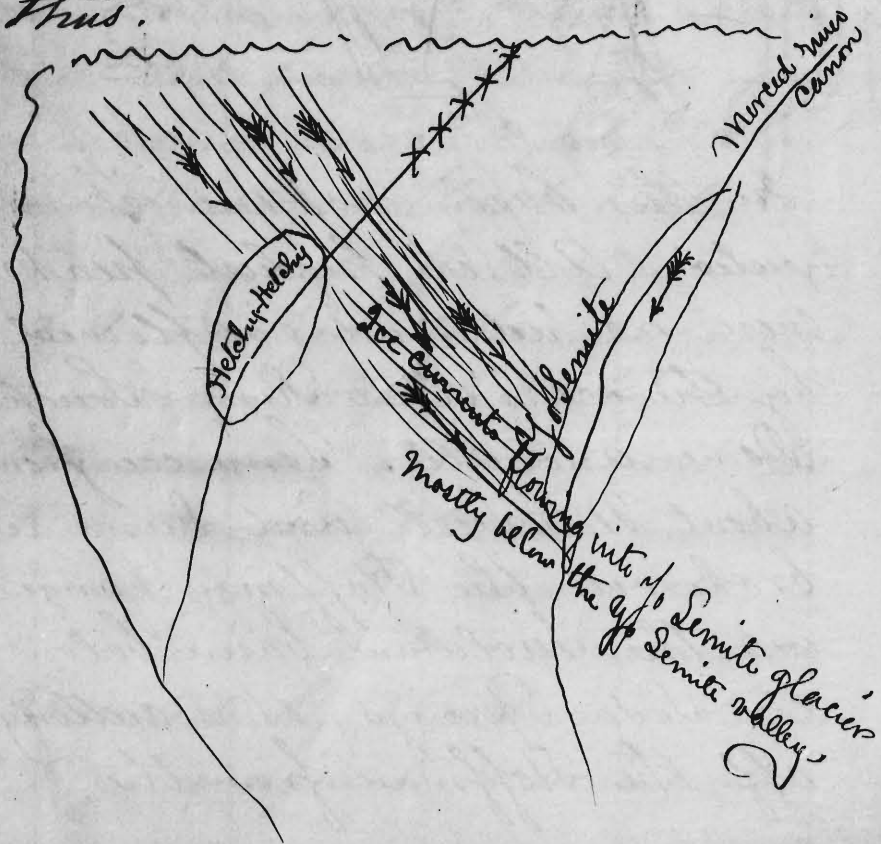
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main range, and vast ice
flows from the Tuolumne above
Ketchy Ketchy broke over into
the Merced basin by the "Go
Seminite, Cascade and Samaras
tributaries. Most of this Tuol-
umne ice had to cross the
great canon reaching from
near the Soda Spring to Ketchy,
thus.



To Dr Joseph Le Conte.

Go Semite, Dec 17/93

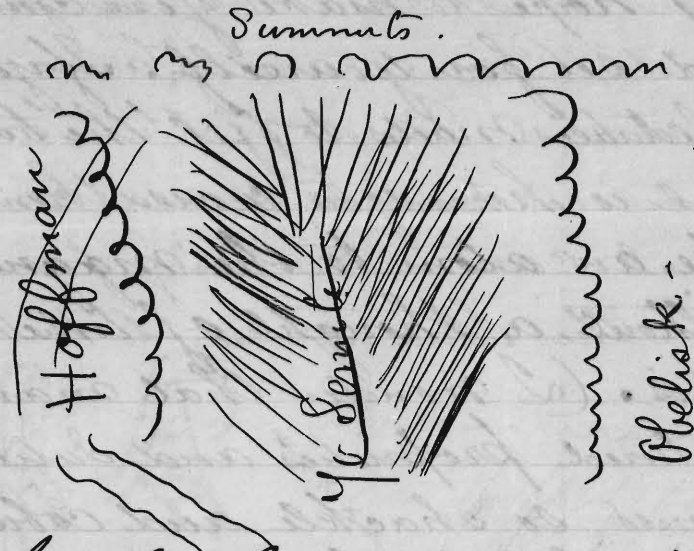
Dear Le Conte.

My seasons work
is done. I have had one gen-
eral view of the Merced basin
above Go Semite and am aston-
ished at the magnitude of the
ancient glaciers with which it
was universally flooded, and
of the work which they accom-
plished. The entire basin is one
glacial monument covered
with inscriptions, some graven
in small line characters too
minute for our eyes, others dif-
ficult to read because of their
magnitude, the depth of canon
and height of some composing
the separate letters thereof.

I do not hope to make any adequate translation of what I have seen and heard. I only hope to make you come and see for yourself. If you could be made to feel the truth that is here you would come like an atom to the magnet without a thought of time or duties. (I wonder that manufactured proprieties and duties should so shackle and cobweb God's human flesh.) But next year you will have what you call vacation, when mankind and your wife will let you come, but I set a few baits to make sure of you.

The Merced ice basin was bounded by the summits, and by two spurs which once

reached to the summits, viz. the Hoffman and Obelisk ranges, thus -



In this basin not one island existed. All its highest peaks were washed and overflowed by the ice. Starr King, South Dome and all. Some ice from about Mt Lyell and Dana, etc broke over the Hoffman range into the Tuolumne basin below the Soda Springs, thus cutting off the Hoffman from the

4.
 because many of these mountains continued to shelter and feed fragmentary glacierets long after the main trunks to which they belonged were dead, like those of the present day crouching behind Mt Tyell, Red Mountain, Black Mt, &c. steepening all their north sides.

The streams of this region were never much larger than they are at present. — None of the upper Merced streams give any record of floods greater than the spring floods of to-day.

Cross section of glacial and water basin of Nevada a few miles above Little Yosemite

Glacial strata clear and unwashed as low as the point indicated by arrows, also at the same point there

are unroofed glacial breccias.

4. [8]
 The Tuolumne canon above Ketchy-Ketchy is deep as Yo Semite, and the fact that so much ice flowed easily over it into the Merced basin gives some idea of the Magnitude of the Glaciers of this region. It is only the vastness of the glacial pathways of these mountains that prevents our seeing them at once. The English Alphabet would puzzle a professor if written large enough, and if each letter were made up of many smaller ones. The bed of one unbroken ice river is ~~composed of~~ ~~bedded with~~ ~~forats~~, and a net work of tiny water channels.

The great central Glaciers of Yo-Semite did

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not come squeezingly, gropingly down to the main valley by the narrow, angular, tortuous channels canons of Tenaya & Illilouette, but all of this summit ice was united above the Valley, even toward the later glacial period, and flowed grandly and directly over all the upper domes like a steady wind, while its lower, bottom currents went mazing and swedging down among the crooked and some blocked channels below.

Glaciers have made every mountain form of this whole basin, and even the summit mountains are only fragments, remnants of their pre-glacial selves.

Every summit wherein are laid the sources - the mounds

of glaciers is steeper upon the north than the south side, because of the difference in depth and duration between exposed and sheltered glaciers, and this difference in steepness between the N and S. Side of summits is greater on the lower summits, as those of the Obelisk group.

This tells us something of the glacial climate. Such Mts as Clouds Rest, Star King, Cathedral Peak, &c., do not come under the general law, because their contours were determined by the ice that flowed above them, but even among these basin Mts we frequently find marked difference of steepness upon their N. and South Sides,